FILE 'REGISTRY' ENTERED AT 09:43:05 ON 20 JUN 2007

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STRUCTURE FILE UPDATES: 19 JUN 2007 HIGHEST RN 937844-74-1
DICTIONARY FILE UPDATES: 19 JUN 2007 HIGHEST RN 937844-74-1

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=> ....Testing the current file.... screen

ENTER SCREEN EXPRESSION OR (END):end

=> screen 1006 AND 2076

L1 SCREEN CREATED

=>
Uploading C:\Program Files\Stnexp\Queries\10765832 amdt1.str

chain nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
chain bonds :
1-2 1-10 1-11 2-3 2-12 2-13 3-4 3-8 3-9 4-5 4-6 5-7
exact/norm bonds :
1-2
exact bonds :
1-10 1-11 2-3 2-12 2-13 3-4 3-8 3-9 5-7
normalized bonds :
4-5 4-6

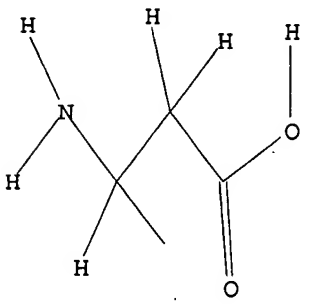
Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom

L2 STRUCTURE UPLOADED

=> que L2 AND L1

L3 QUE L2 AND L1

=> d L2
L2 HAS NO ANSWERS
L2 STR



Structure attributes must be viewed using STN Express query preparation.

=> s L2 full
FULL SEARCH INITIATED 09:43:29 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 853388 TO ITERATE

100.0% PROCESSED 853388 ITERATIONS 38540 ANSWERS
SEARCH TIME: 00.00.06

L4 38540 SEA SSS FUL L2

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	172.10	172.31

FILE 'CAPLUS' ENTERED AT 09:43:41 ON 20 JUN 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 20 Jun 2007 VOL 146 ISS 26
FILE LAST UPDATED: 19 Jun 2007 (20070619/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/infopolicy.html

=> s L4

```
L5       78672 L4

=> s optically active
        101622 OPTICALLY
        984736 ACTIVE
          1209 ACTIVES
        985434 ACTIVE
                 (ACTIVE OR ACTIVES)
L6       39040 OPTICALLY ACTIVE
                 (OPTICALLY(W)ACTIVE)

=> s L5 and L6
L7         268 L5 AND L6

=> s lithium amide
        325570 LITHIUM
           370 LITHIUMS
        325698 LITHIUM
                 (LITHIUM OR LITHIUMS)
        130526 AMIDE
         82074 AMIDES
        177948 AMIDE
                 (AMIDE OR AMIDES)
L8        1486 LITHIUM AMIDE
                 (LITHIUM(W)AMIDE)

=> s L7 and L8
L9           1 L7 AND L8

=> d L9 bib abs

L9   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   1990:424454  CAPLUS
DN   113:24454
TI   Non-proteinogenic amino acid synthesis.  The β-anion derived from
     aspartic acid, and its application to α-amino acid synthesis
AU   Baldwin, Jack E.; Moloney, Mark G.; North, Michael
CS   Dyson Perrins Lab., Univ. Oxford, Oxford, OX1 3QY, UK
SO   Tetrahedron (1989), 45(19), 6309-18
     CODEN: TETRAB; ISSN: 0040-4020
DT   Journal
LA   English
OS   CASREACT 113:24454
AB   Treatment of PhCH2O2C-Asp(OMe)-OCMe3 (I) with lithium
     amide bases generates the corresponding β-ester enolate,
     which can be alkylated with suitable electrophiles.  The application of
     this strategy for synthesis of optically active amino
     acids has been investigated.  Thus, treatment of I with LiN(SiMe3)2,
     followed by alkylation with PhCH2Br gave PhCH2O2CNHCH(CO2CMe3)CH(CO2Me)CH2
     Ph (II).  Saponification, decarboxylation, and deblocking of II gave
     (S)-homophenylalanine in 80% enantiomeric excess.


=> s alpha beta unsaturated esters
       1692654 ALPHA
          2493 ALPHAS
       1692761 ALPHA
                 (ALPHA OR ALPHAS)
       1460247 BETA
          1325 BETAS
       1460324 BETA
                 (BETA OR BETAS)
         56941 UNSATURATED
             1 UNSATURATEDS
         56942 UNSATURATED
```

β-amino acids & α-amino acids
L7

```
                (UNSATURATED OR UNSATURATEDS)
         228107 UNSATD
             13 UNSATDS
         228110 UNSATD
                (UNSATD OR UNSATDS)
         243007 UNSATURATED
                (UNSATURATED OR UNSATD)
         442286 ESTERS
              2 ESTERSES
         442287 ESTERS
                (ESTERS OR ESTERSES)
L10        1805 ALPHA BETA UNSATURATED ESTERS
                (ALPHA(W)BETA(W)UNSATURATED(W)ESTERS)

=> s L8 and L10
L11          17 L8 AND L10

=> s beta amino acid
        1460247 BETA
           1325 BETAS
        1460324 BETA
                (BETA OR BETAS)
        1122672 AMINO
             44 AMINOS
        1122690 AMINO
                (AMINO OR AMINOS)
        4388668 ACID
        1578656 ACIDS
        4888060 ACID
                (ACID OR ACIDS)
L12        2949 BETA AMINO ACID
                (BETA(W)AMINO(W)ACID)

=> s L11 and L12
L13           9 L11 AND L12

=> d L13 1-9 bib abs

L13  ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2006:780658  CAPLUS
DN   145:397754
TI   Homochiral lithium amides for the asymmetric synthesis
     of β -amino acids
AU   Davies, Stephen G.; Garrido, Narciso M.; Kruchinin, Dennis; Ichihara,
     Osamu; Kotchie, Luke J.; Price, Paul D.; Mortimer, Anne J. Price; Russell,
     Angela J.; Smith, Andrew D.
CS   Department of Organic Chemistry, Chemistry Research Laboratory, University
     of Oxford, Oxford, OX1 3TA, UK
SO   Tetrahedron: Asymmetry (2006), 17(12), 1793-1811
     CODEN: TASYE3; ISSN: 0957-4166
PB   Elsevier B.V.
DT   Journal
LA   English
AB   Secondary homochiral lithium amides derived from
     α-methylbenzylamine undergo highly diastereoselective conjugate
     addns. to a range of α ,β -unsatd.
     esters.  The corresponding β -amino
     acids are readily liberated by successive N-debenzylation and
     ester hydrolysis, furnishing (R)-β-amino butyric acid,
     (R)-β-amino pentanoic acid, (S)-β-leucine, (R)-β-amino
     octanoic acid, (S)-β-phenylalanine, (S)-β-tyrosine Me ether,
     (S)-β-tyrosine hydrochloride and (S)-β-(2-methoxyphenyl)-β-
     amino propanoic acid in high yields and high ee.  The application of this
     procedure to the synthesis of the natural products (R)-β-DOPA and
     (R)-β-lysine is demonstrated.  The development of a simplified
```

one-pot reaction protocol applicable to the multi-gram scale synthesis of homochiral β-amino esters is also delineated.
RE.CNT 89 THERE ARE 89 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:246002 CAPLUS
DN 142:482282
TI Cyclic β -amino acid derivatives: synthesis via lithium amide promoted tandem asymmetric conjugate addition-cyclization reactions
AU Davies, Stephen G.; Diez, David; Dominguez, Sara H.; Garrido, Narciso M.; Kruchinin, Dennis; Price, Paul D.; Smith, Andrew D.
CS Department of Organic Chemistry, Chemical Research Laboratory, University of Oxford, Oxford, OX1 3TA, UK
SO Organic & Biomolecular Chemistry (2005), 3(7), 1284-1301
CODEN: OBCRAK; ISSN: 1477-0520
PB Royal Society of Chemistry
DT Journal
LA English
OS CASREACT 142:482282
AB The product distribution upon conjugate addition of homochiral lithium N-benzyl-N-α-methylbenzylamide to dimethyl-(E,E)-nona-2,7-dienedioate can be controlled to give either the cyclic 1,2-anti-1,6-anti-β-amino ester (derived from conjugate addition and intramol. enolate cyclization) or the acyclic bis-β-amino ester derivative (derived from double conjugate addition) in high de. The introduction of a protected nitrogen functionality into the diester skeleton facilitates, after conjugate addition and intramol. enolate cyclization, the asym. construction of piperidines in high de; variation in the N-protecting group indicates that the highest stereoselectivity is observed with α-branched N-substituents. Tandem conjugate addition-aldol reactions can also be achieved stereoselectively, with lithium amide conjugate addition to .vepsiln.- and ζ-oxo- .alpha .,β -unsatd. esters giving the corresponding five and six membered cyclic β-amino esters in high de. N-deprotection by hydrogenolysis of the products arising from these reactions furnishes a range of polyfunctionalised transpentacin and transhexacin derivs. in high de and ee.
RE.CNT 81 THERE ARE 81 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:763180 CAPLUS
DN 141:395393
TI Asymmetric synthesis of 3,4,5,6-tetrasubstituted piperidin-2-ones by three-component coupling
AU Davies, Stephen G.; Smith, Andrew D.; Cowley, Andrew R.
CS Department of Organic Chemistry, Chemistry Research Laboratory, University of Oxford, Oxford, OX1 3TA, UK
SO Synlett (2004), (11), 1957-1960
CODEN: SYNLES; ISSN: 0936-5214
PB Georg Thieme Verlag
DT Journal
LA English
OS CASREACT 141:395393
AB The asym. three-component coupling of α ,β -unsatd. esters and alkylidenemalonates initiated with a homochiral lithium amide proceeds with high levels of diastereoselectivity, with hydrogenation of the resultant α-substituted β -amino acid derivs. giving a range of differentially protected 3,4,5,6-tetrasubstituted piperidinones with four contiguous stereogenic centers.
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD

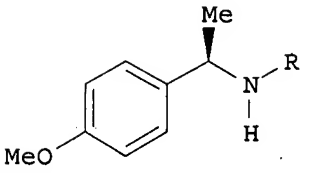
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2002:526645 CAPLUS
DN 137:295209
TI Ring closing metathesis for the asymmetric synthesis of (S)-homopipecolic acid, (S)-homoproline and (S)-coniine
AU Davies, Stephen G.; Iwamoto, Keiji; Smethurst, Christian A. P.; Smith, Andrew D.; Rodriguez-Solla, Humberto
CS The Dyson Perrins Laboratory, University of Oxford, Oxford, OX1 3QY, UK
SO Synlett (2002), (7), 1146-1148
CODEN: SYNLES; ISSN: 0936-5214
PB Georg Thieme Verlag
DT Journal
LA English
OS CASREACT 137:295209
AB Diastereoselective conjugate addition of lithium (S)-N-allyl-N-α-methylbenzylamide to α ,β -unsatd.
esters or Weinreb amides, followed by ring closing metathesis is used to afford the cyclic β -amino acids
(S)-homopipecolic acid and (S)-homoproline and the amine (S)-coniine in high ee.
RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

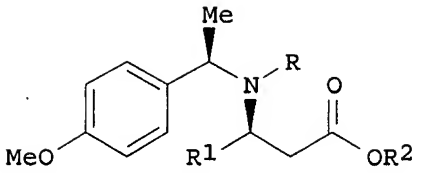
L13 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2002:407900 CAPLUS
DN 137:370329
TI Asymmetric synthesis of homochiral differentially protected bis-.beta.-amino acid scaffolds
AU Bull, Steven D.; Davies, Stephen G.; Roberts, Paul M.; Savory, Edward D.; Smith, Andrew D.
CS University of Oxford, The Dyson Perrins Laboratory, Oxford, OX1 3QY, UK
SO Tetrahedron (2002), 58(23), 4629-4642
CODEN: TETRAB; ISSN: 0040-4020
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 137:370329
AB A strategy for the asym. synthesis of homochiral [(R,R)- or (S,S)-], or meso-(R,S) bis-β -amino acid scaffolds,
formally resulting from the stepwise conjugate addition of two differentially protected homochiral lithium amides to two .alpha.,β -unsatd. esters
attached to a central arene, is demonstrated. Further manipulation enables the efficient synthesis of orthogonally protected pseudo-meso or pseudo-C2 sym. scaffolds via selective N-benzyl or N-allyl deprotection, enabling regio-, stereo- and chemoselective functionalization.
RE.CNT 88 THERE ARE 88 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2000:282509 CAPLUS
DN 133:89282
TI A chiral, oxidatively cleavable auxiliary in conjugate additions of lithium amides. Preparation of enantiomerically pure .beta.-amino acid derivatives
AU Podlech, Joachim
CS Institut fur Organische Chemie der Universitat Stuttgart, Stuttgart, D-70569, Germany
SO Synthetic Communications (2000), 30(10), 1779-1786
CODEN: SYNCAV; ISSN: 0039-7911
PB Marcel Dekker, Inc.
DT Journal
LA English

OS CASREACT 133:89282
GI



I

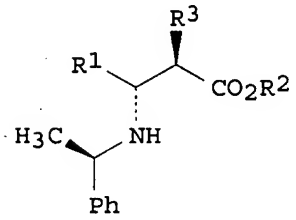


II

AB Addition of the lithium salts of enantiomerically pure α-methyl-4-methoxybenzylamines I (R = allyl, 4-MeOC6H4CH2) to α ,. beta.-unsatd. esters R1CH:CHCO2R2 (R1, R2 = Ph, tert-Bu; Ph, Me; Me, Et) gave β -amino acid derivs. II with stereoselectivities > 95:5. The chiral auxiliary in II (R = 4-MeOC6H4CH2; R1 = Ph; R2 = Me) was cleaved by oxidation with cerium(IV) ammonium nitrate and subsequent hydrolysis of the resulting imines to give (S)-PhCH(NH2)CH2CO2Me in 60% yield.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1998:619258 CAPLUS
DN 130:4037
TI Tandem protocol for the stereoselective synthesis of different polyfunctional β -amino acids and 3-amino-substituted carbohydrates
AU Sewald, Norbert; Hiller, Klaus D.; Koerner, Matthias; Findeisen, Matthias
CS Department of Organic Chemistry, University of Leipzig, Leipzig, Germany
SO Journal of Organic Chemistry (1998), 63(21), 7263-7274
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
GI



I

AB Conjugate addition of homochiral amidocuprates or lithium amides derived from (R)-N-(1-phenylethyl)(trimethylsilyl)amine to α ,β -unsatd. esters, (E)-R1CH:CHCO2R2 (R1 = Me, Et, CHMe2, Ph; R2 = Et, Me), proceeds stereoselectively and allows the synthesis of β -amino acids I (R3 = H). Trapping of the intermediate ester enolate with D2O affords the corresponding deuterated compds. I (R3 = D). Anti-α-alkyl- β -amino acids are obtained stereoselectively after transmetalation of the lithium/copper ester enolate to the titanium ester enolate and trapping with carbon electrophiles. Both diastereomers of β-homothreonine, other precursors of 3-amino-substituted carbohydrates, and stereoselectively

deuterated analogs at position 2 are formed from enantiomerically pure γ-alkoxy-substituted enoates. The product distribution observed is complementary to published results regarding 1,4-addition to γ-silyloxy-substituted enoates. The anti/syn selectivity can be explained by assuming transition state geometries where the delivery of the nitrogen nucleophile is controlled by lithium "chelation" between reagent and substrate. In one case the product configuration can be controlled by the reagent irresp. of the substrate stereochem.; in other cases, the topicity of the addition is complementary to published results. For instance, erythro- or threo-configured 2,3-dideoxy-3-aminopentoses are accessible via this route.

RE.CNT 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1997:692754 CAPLUS
DN 127:331307
TI (1'S,4S)-2-aryl-4-(1'-hydroxybenzyl)-4,5-dihydrooxazole as a useful chiral auxiliary for the synthesis of β -amino acids and β-lactams in a highly stereoselective manner
AU Shimizu, Makoto; Maruyama, Shingo; Suzuki, Yasuhiro; Fujisawa, Tamotsu
CS Dep. Chem. Materials, Mie Univ., Mie, 514, Japan
SO Heterocycles (1997), 45(10), 1883-1889
CODEN: HTCYAM; ISSN: 0385-5414
PB Japan Institute of Heterocyclic Chemistry
DT Journal
LA English
OS CASREACT 127:331307
AB (1'S,4S)-2-Aryl-4-(1'-hydroxybenzyl)-4,5-dihydrooxazole prepared from (1S,2S)-2-amino--1-phenylpropane-1,3-diol has been found to be a useful chiral auxiliary from the stereoselective synthesis of β-lactams and β -amino acids in the reaction of imine-ester enolate condensation or 1,4-addition of lithium amides to α ,β -unsatd. esters.

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1991:429864 CAPLUS
DN 115:29864
TI Asymmetric synthesis of R-β-aminobutanoic acid and S-β-tyrosine: homochiral lithium amide equivalents for Michael additions to α ,β -unsaturated esters
AU Davies, Stephen G.; Ichihara, Osamu
CS Dyson Perrins Lab., Univ. Oxford, Oxford, OX1 3QY, UK
SO Tetrahedron: Asymmetry (1991), 2(3), 183-6
CODEN: TASYE3; ISSN: 0957-4166
DT Journal
LA English
OS CASREACT 115:29864
AB Michael addition of (R)-PhCHMeNLiCH2Ph to (E)-MeCH:CHCO2CH2Ph is highly stereoselective (95% diastereomeric excess), giving after debenzylation and crystallization homochiral (R)-β-aminobutanoic acid. A similar addition to (E)-4-PhCH2OC6H4CH:CHCO2Me is completely stereoselective giving after debenzylation and acid hydrolysis homochiral (S)-β-tyrosine as its HCl salt.

=>

---Logging off of STN---

FILE 'REGISTRY' ENTERED AT 09:13:19 ON 20 JUN 2007
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STRUCTURE FILE UPDATES: 19 JUN 2007 HIGHEST RN 937844-74-1
DICTIONARY FILE UPDATES: 19 JUN 2007 HIGHEST RN 937844-74-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> ....Testing the current file.... screen

ENTER SCREEN EXPRESSION OR (END):end

=> screen 1006 AND 2076

L1 SCREEN CREATED

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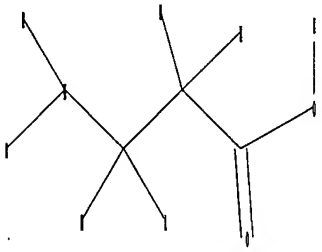
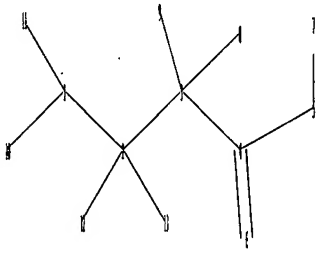




chain nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
chain bonds :
1-2 1-10 1-11 2-3 2-12 2-13 3-4 3-8 3-9 4-5 4-6 5-7
exact/norm bonds :
1-2 2-13
exact bonds :
1-10 1-11 2-3 2-12 3-4 3-8 3-9 5-7
normalized bonds :
4-5 4-6

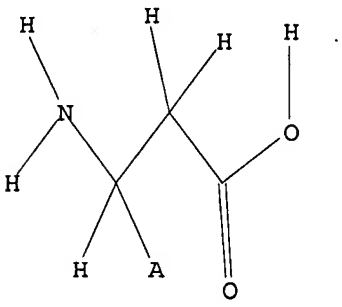
Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom

L2 STRUCTURE UPLOADED

=> que L2 AND L1

L3 QUE L2 AND L1

=> d L2
L2 HAS NO ANSWERS
L2 STR



Structure attributes must be viewed using STN Express query preparation.

=> s L2 full
FULL SEARCH INITIATED 09:13:43 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 943166 TO ITERATE

100.0% PROCESSED 943166 ITERATIONS 38585 ANSWERS
SEARCH TIME: 00.00.06

L4 38585 SEA SSS FUL L2

=> file caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 172.10 172.31

FILE 'CAPLUS' ENTERED AT 09:13:56 ON 20 JUN 2007
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FILE COVERS 1907 - 20 Jun 2007 VOL 146 ISS 26
FILE LAST UPDATED: 19 Jun 2007 (20070619/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/infopolicy.html

=> s L4

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L5       78721 L4

=> s process
       2445141 PROCESS
       1661071 PROCESSES
L6     3644695 PROCESS
                 (PROCESS OR PROCESSES)

=> s L5 and L6
L7        6269 L5 AND L6

=> s beta amino acids
       1460247 BETA
          1325 BETAS
       1460324 BETA
                 (BETA OR BETAS)
       1122672 AMINO
            44 AMINOS
       1122690 AMINO
                 (AMINO OR AMINOS)
       1578656 ACIDS
L8        1611 BETA AMINO ACIDS
                 (BETA(W)AMINO(W)ACIDS)

=> s L7 and L8
L9          17 L7 AND L8

=> d L9 1-17 bib abs hitstr

L9   ANSWER 1 OF 17  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2007:385362  CAPLUS
DN   146:396162
TI   Recombinantly produced polyhydroxyalkanoate polymer particles displaying
     fusion proteins for a variety of diagnostic, analytical, and therapeutic
     uses
IN   Rehm, Bernd Helmut Adam; Backstrom, Bjorn Thomas
PA   N. Z.
SO   PCT Int. Appl., 199pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
PI   WO 2007037706         A2    20070405    WO 2006-NZ251           20060927
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
             KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN,
             MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
             RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
PRAI NZ 2005-542644        A     20050927
     NZ 2005-544096        A     20051212
     NZ 2005-544097        A     20051212
AB   The present invention relates to production and use of polymer particles where
     the polymer comprises poly(β -amino acids
     ), polylactates, polythioesters, or polyesters, and in particular
     polyhydroxyalkanoates (PHA) or more specifically poly(3-hydroxybutyrate).
     In particular the invention relates to functionalized polymer particles,
```

processes of production, and uses thereof. Production of polymer particles are produced by recombinant host cells transfected with expression constructs comprising at lease one nucleotide sequence encoding a polymer synthase and at least one nucleotide sequence encoding a fusion protein of polymer synthase and at least one fusion partner, and optionally addnl. fusions of polymer particle-binding domains and a fusion partner. The method is exemplified by the preparation of PHA particles displaying fusion polypeptides comprising phasin (PhaP from Ralstonia eutropha) and mouse oligodendrocyte glycoprotein (MOG) or interleukin-2, or a fusion polypeptide comprising an antibody binding the ZZ domain of Staphylococcus aureus protein A. The methods, polymer particles and fusion proteins of the present invention have utility in diagnostics, protein production, biocatalyst immobilization, and drug delivery.

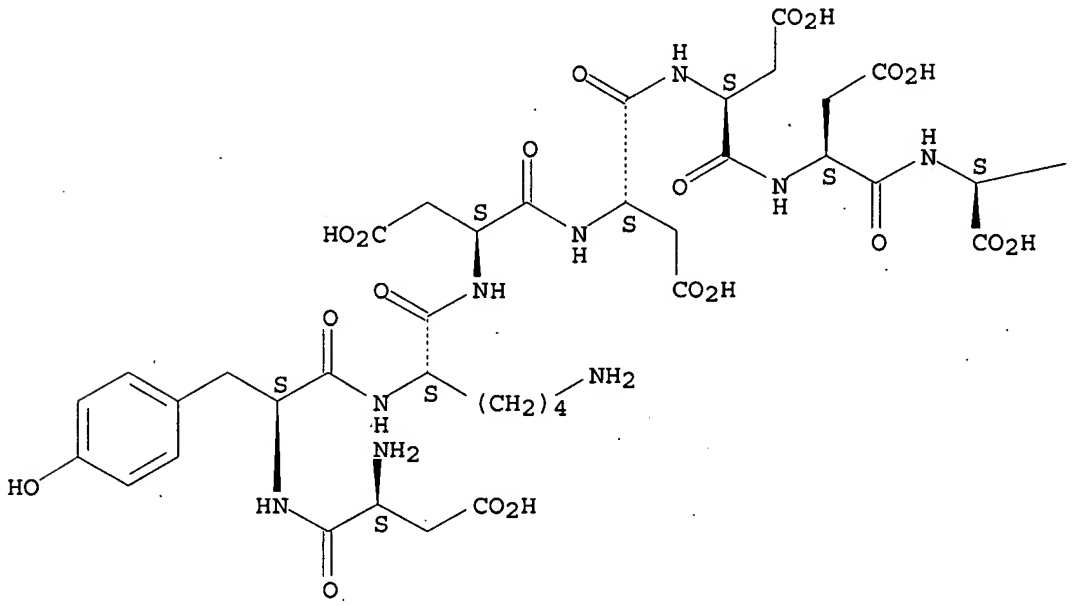
IT 98849-88-8, FLAG peptide
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)
(fusion partner on polymer particles; recombinantly produced polyhydroxyalkanoate polymer particles displaying fusion proteins for a variety of diagnostic, anal., and therapeutic uses)

RN 98849-88-8 CAPLUS

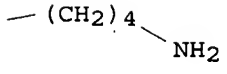
CN L-Lysine, L-α-aspartyl-L-tyrosyl-L-lysyl-L-α-aspartyl-L-α-aspartyl-L-α-aspartyl-L-α-aspartyl- (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



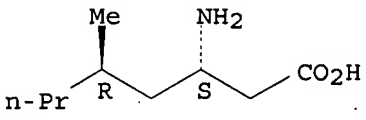
L9 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:1007676 CAPLUS
DN 145:376924
TI Improved process for preparation of optically pure substituted β-amino heptanoic acids as ligands for α-2δ-subunit of calcium channel for treatment of pain and sleep disorders
IN Franczyk, Thaddeus Stephan, II; Herrinton, Paul Matthew; Perrault, William Roland
PA Pharmacia & Upjohn Company LLC, USA
SO PCT Int. Appl., 74pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006100568	A1	20060928	WO 2006-IB637	20060313
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2006265251	A	20061005	JP 2006-80221	20060323
PRAI US 2005-665502P	P	20050324		

OS MARPAT 145:376924
AB Non-racemic 3-amino-4-R1-5-R2-7-R3-heptanoic acids, having at least 2 stereogenic centers (1, R1, R2, R3 = H, C1-6 alkyl, C3-6 cycloalkyl, aryl, aralkyl, arylamino, optionally substituted with Cl, F, NH2, NO2, CN groups; C1-3 alkyl optionally F1-3-substituted; R1 and R2 ≠ H), useful as ligands for calcium channel for treatment of pain and sleep disorders, including insomnia, fibromyalgia, epilepsy, neuropathic pain and others (no data), were prepared by an improved process comprising asym. hydrogenation of dienoic R6-esters of 3-(R7-amino)-4-R1-5-R2-7-R3-2,6-heptanedioic acids (6; same R1, R2, R3; R6 = H, optionally unsatd. C1-7 organyl; R7 = H, C1-7 acyl) with subsequent optional hydrolysis. The compds. 6 were prepared by stereoselective addition of allylamines R2CH:CHCH(R3)NR4R5 [2, preferably having (1R,2Z)- or (1S,2E)-configuration; R4, R5 = C1-6 alkyl, preferably R4R5N = (S)-2-methyl-1-pyrrolidinyl] with 2-butynoates R1CH2C.tplbond.CCOOR6 (same R1, R6) in the presence of Lewis bases, preferably Et3N, or Lewis acids, preferably Group IA-Group IIIA metal salts, to give the tertiary enamines, 3-(R4R5-amino)-4-R1-5-R2-7-R3-2,6-heptanedioic acids (5, same R), followed by conversion of 5 to 6 by reaction with ammonia. In an example, Et (3S,5R)-3-acetylamino-5-methyloctanoate was prepared by asym. hydrogenation of 4.179 mmol of Et (2Z,5S,6E)-3-acetylamino-5-methyl-2,6-octadienoate in the presence of 0.042 mmol of [[(R)-BINAPINE](NBD)Rh]BF4 in 15 mL of MeOH at 2 atm of H2 and 30° for 26 h, followed by hydrogenation on 0.5 g of 5% Pd/C at 2 atm and 30° for 18 h; the ester was then hydrolyzed affording (3S,5R)-1 (R1 = H, R2 = R3 = Me) with 92% yield and 96.3% of diastereomeric purity.
IT 610300-00-0P 866108-39-6P 866108-50-1P
911053-42-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(process for preparation of chiral β-amino heptanoic acids as ligands for α-2δ-subunit of calcium channel for treatment of pain and sleep disorders)
RN 610300-00-0 CAPLUS
CN Octanoic acid, 3-amino-5-methyl-, hydrochloride, (3S,5R)- (9CI) (CA INDEX

NAME)

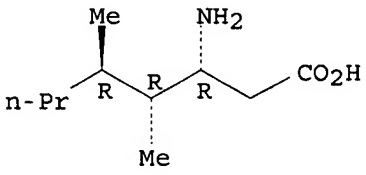
Absolute stereochemistry. Rotation (-).



● HCl

RN 866108-39-6 CAPLUS
CN Octanoic acid, 3-amino-4,5-dimethyl-, hydrochloride, (3R,4R,5R)- (9CI) (CA INDEX NAME)

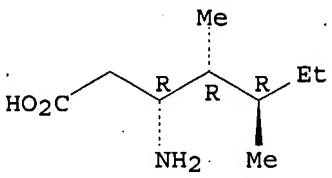
Absolute stereochemistry. Rotation (+).



● HCl

RN 866108-50-1 CAPLUS
CN Heptanoic acid, 3-amino-4,5-dimethyl-, hydrochloride, (3R,4R,5R)- (9CI) (CA INDEX NAME)

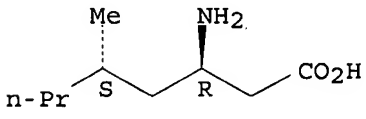
Absolute stereochemistry. Rotation (+).



● HCl

RN 911053-42-4 CAPLUS
CN Octanoic acid, 3-amino-5-methyl-, hydrochloride, (3R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



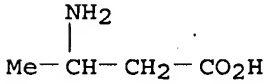
● HCl

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:215641 CAPLUS
DN 142:261785
TI Process for obtaining enantiopure compounds
IN Callens, Roland; Blondeel, Georges; Pousset, Cyrille; Gire, Ronan
PA Solvay Sa, Belg.
SO Fr. Demande, 20 pp.
CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2859471	A1	20050311	FR 2003-10582	20030909
	FR 2859471	B1	20060203		
	WO 2005023838	A1	20050317	WO 2004-EP52094	20040908
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1664084	A1	20060607	EP 2004-766744	20040908
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC; PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	CN 1845934	A	20061011	CN 2004-80025613	20040908
	US 2007027326	A1	20070201	US 2006-570933	20060308
PRAI	FR 2003-10582	A	20030909		
	WO 2004-EP52094	W	20040908		

OS CASREACT 142:261785
AB The invention relates to a process for obtaining enantiopure compds. which have at least one functional group which can react with an activated carboxyl group. Specifically, the method can be applied to the separation of enantiomers of a β-amino acid by reaction with an N-protected α-amino acid activated derivative Thus, treatment of persilylated DL-3-amino-3-phenylpropionic acid with 1-tosyl-L-pyroglutamyl chloride in AcOEt in the presence of Et3N afforded dipeptide product as a mixture of diastereomers. Chromatog. separation of the diastereomers and treatment with 4 N HCl yielded D-3-amino-3-phenylpropionic acid, along with N-tosyl-L-glutamic acid.
IT 541-48-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for obtaining enantiopure β - amino acids)
RN 541-48-0 CAPLUS
CN Butanoic acid, 3-amino- (CA INDEX NAME)

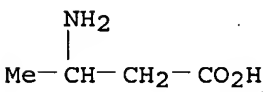


RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

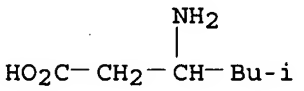
L9 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:36482 CAPLUS
DN 142:133207
TI Enzymic stereospecific and enantiomeric enrichment of β -amino acids
IN Chase, Matthew; Clayton, Robert; Landis, Bryan; Banerjee, Amit
PA Pharmacia Corporation, USA
SO U.S. Pat. Appl. Publ., 44 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005009151	A1	20050113	US 2004-875161	20040622
	CA 2529509	A1	20050120	CA 2004-2529509	20040630
	WO 2005005633	A2	20050120	WO 2004-IB2183	20040630
	WO 2005005633	A3	20050512		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1646718	A2	20060419	EP 2004-743849	20040630
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	BR 2004012308	A	20060620	BR 2004-12308	20040630
PRAI	US 2003-486032P	P	20030710		
	US 2003-499622P	P	20030902		
	WO 2004-IB2183	W	20040630		

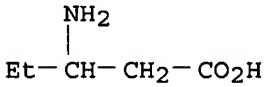
OS MARPAT 142:133207
AB The present invention relates to methods for the stereospecific synthesis and for the enantiomeric enrichment of β -amino acids. A novel D-β-aminotransferase, which exhibits stereoselectivity for D-β-phenylalanine, (D-3-amino-3-phenylpropinine acid) was purified from a newly-isolated strain of Variouorax paradoxus. A novel L-β-aminotransferase was purified from a newly-isolated strain of Alcaligenes eutrophus . The D- and L-β-aminotransferases can be used to facilitate the stereoselective biosynthesis of β-D-phenylalanine or β-L-phenylalanine, from a mixture of L-glutamic acid or L-alanine, resp., and 3-keto-3-phenylpropionic acid in the presence of the cofactor pyridoxal phosphate.
IT 541-48-0P, 3-Aminobutyric acid 3653-34-7P
18664-78-3P, 3-Aminopentanoic acid 150618-42-1P
824424-63-7P 824424-67-1P 824424-68-2P
824424-70-6P 824424-72-8P
RL: BCP (Biochemical process); BPN (Biosynthetic preparation); RCT (Reactant); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(enzymic stereospecific and enantiomeric enrichment of β -amino acids)
RN 541-48-0 CAPLUS
CN Butanoic acid, 3-amino- (CA INDEX NAME)



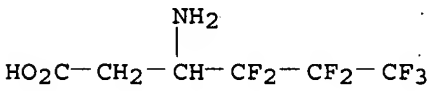
RN 3653-34-7 CAPLUS
CN Hexanoic acid, 3-amino-5-methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



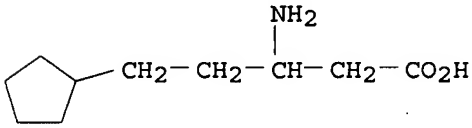
RN 18664-78-3 CAPLUS
CN Pentanoic acid, 3-amino- (9CI) (CA INDEX NAME)



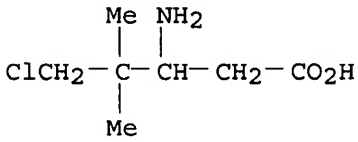
RN 150618-42-1 CAPLUS
CN Hexanoic acid, 3-amino-4,4,5,5,6,6,6-heptafluoro- (9CI) (CA INDEX NAME)



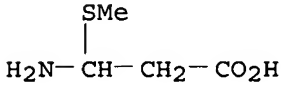
RN 824424-63-7 CAPLUS
CN Cyclopentanepentanoic acid, β-amino- (9CI) (CA INDEX NAME)



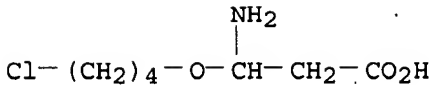
RN 824424-67-1 CAPLUS
CN Pentanoic acid, 3-amino-5-chloro-4,4-dimethyl- (9CI) (CA INDEX NAME)



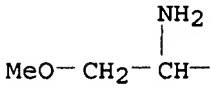
RN 824424-68-2 CAPLUS
CN Propanoic acid, 3-amino-3-(methylthio)- (9CI) (CA INDEX NAME)



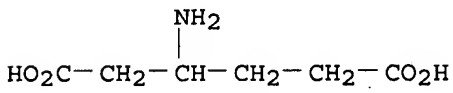
RN 824424-70-6 CAPLUS
CN Propanoic acid, 3-amino-3-(4-chlorobutoxy)- (9CI) (CA INDEX NAME)



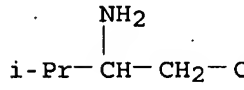
RN 824424-72-8 CAPLUS
CN Butanoic acid, 3-amino-4-methoxy- (9CI) (CA INDEX NAME)



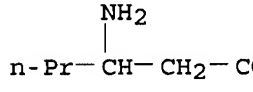
IT 5427-96-3P, 3-Aminoadipic acid
RL: BCP (Biochemical process); BYP (Byproduct); RCT (Reactant); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(enzymic stereospecific and enantiomeric enrichment of β -amino acids)
RN 5427-96-3 CAPLUS
CN Hexanedioic acid, 3-amino- (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 5699-54-7
RL: BCP (Biochemical process); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
(enzymic stereospecific and enantiomeric enrichment of β -amino acids)
RN 5699-54-7 CAPLUS
CN Pentanoic acid, 3-amino-4-methyl- (CA INDEX NAME)

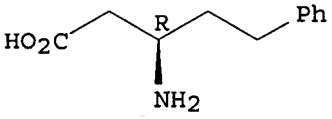


IT 58521-63-4P, 3-Aminohexanoic acid
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(enzymic stereospecific and enantiomeric enrichment of β -amino acids)
RN 58521-63-4 CAPLUS
CN Hexanoic acid, 3-amino- (7CI, 9CI) (CA INDEX NAME)



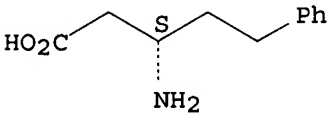
IT 147228-37-3 218278-62-7
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(enzymic stereospecific and enantiomeric enrichment of β -amino acids)
RN 147228-37-3 CAPLUS
CN Benzenepentanoic acid, β-amino-, (βR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 218278-62-7 CAPLUS
CN Benzenepentanoic acid, β-amino-, (βS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:473144 CAPLUS
DN 139:51694
TI Methods for the preparation of β -amino acids
IN Frey, Perry A.; Ruzicka, Frank J.
PA Wisconsin Alumni Research Foundation, USA
SO U.S. Pat. Appl. Publ., 34 pp., Cont.-in-part of U.S. Ser. No. 847,010.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003113882	A1	20030619	US 2002-235939	20020905
	US 6248874	B1	20010619	US 1999-330611	19990611
	US 2002173637	A1	20021121	US 2001-847010	20010501
	WO 2004021981	A2	20040318	WO 2003-US27235	20030829
	WO 2004021981	A3	20050602		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003265845	A1	20040329	AU 2003-265845	20030829
PRAI	US 1998-198942	B2	19981124		
	US 1999-330611	A3	19990611		
	US 2001-847010	A2	20010501		
	US 2002-235939	A	20020905		
	WO 2003-US27235	W	20030829		

OS CASREACT 139:51694
AB Purified β -amino acids are of considerable interest in the preparation of pharmacol. active compds. and industrial precursors. Although enantiomerically pure β -amino acids can be produced by standard chemical synthesis, this traditional approach is time consuming, requires expensive starting materials, and results in a racemic mixture which must be purified further. However, DNA mols. encoding lysine 2,3-aminomutase can be used to prepare .beta.-amino acids by methods that avoid the pitfalls of chemical synthesis. The present invention provides a method of

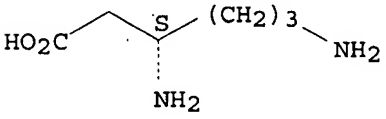
producing enantiomerically pure β -amino acids from β -amino acids comprising catalyzing the conversion of an β-amino acid to a corresponding β-amino acid by utilizing a lysine 2,3-aminomutase as the catalyst.

IT 504-21-2P, L-β-Lysine
RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(methods for the preparation of β -amino acids)

RN 504-21-2 CAPLUS

CN Hexanoic acid, 3,6-diamino-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:116693 CAPLUS

DN 136:295053

TI Reactivity of Amino Acids in Nitrosation Reactions and Its Relation to the Alkylating Potential of Their Products

AU Garcia-Santos, M. Del Pilar; Gonzalez-Mancebo, Samuel; Hernandez-Benito, Jesus; Calle, Emilio; Casado, Julio

CS Departamento de Quimica Fisica, Universidad de Salamanca, Salamanca, E-37008, Spain

SO Journal of the American Chemical Society (2002), 124(10), 2177-2182
CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

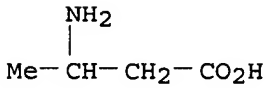
DT Journal

LA English

AB Nitrosation reactions of amino acids with an -NH2 group (six α-amino acids: glycine, alanine, α-aminobutyric acid, α-aminoisobutyric acid, valine, and norvaline; two β -amino acids: β-alanine and β-aminobutyric acid; and one γ-amino acid: γ-aminobutyric acid) were studied. Nitrosation was carried out in aqueous acid media, mimicking the conditions of the stomach lumen. The rate equation was r = k3 exp[amino acid][nitrite]2, with a maximum k3 exp value in the 2.3-2.7 pH range. The existence of an isokinetic relationship supports the argument that all the reactions share a common mechanism. A nitrosation mechanism is proposed, and the following conclusions are drawn: (1) nitrosation reactions of amino acids with a primary amino group in acid media occur with dinitrogen trioxide as the main nitrosating agent. (2) The finding that the nitrosation rate is proportional to the square of the nitrite concentration suggests that the yield of nitrosation products in the stomach would increase sharply with higher nitrate/nitrite intakes. Stomach hypochlorhydria could be a potential enhancer of in vivo amino acid nitrosation. (3) The reactivity (k3 exp) (α-amino acids > beta.-amino acids > γ-amino acids) is the same as that found in a previous work for the alkylating potential of lactones formed from nitrosation products of the same amino acids. This implies that the nitrosation reactions of the most common natural amino acids are the most efficient precursors of the most powerful alkylating agents. (4) The order of magnitude (107-108 M-1 s-1) of the bimol. rate consts. of nitrosation shows that such reactions occur through an encounter process.

IT 541-48-0, β-Aminobutyric acid
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant

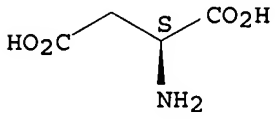
or reagent)
(reactivity of amino acids in nitrosation reactions and its relation to the alkylating potential of their products)
RN 541-48-0 CAPLUS
CN Butanoic acid, 3-amino- (CA INDEX NAME)



RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2001:331744 CAPLUS
DN 135:15766
TI Basic chemical rule of molecular evolution
AU Zhao, Yu-fen; Lu, Kui
CS Key Laboratory for Bioorganic Phosphorus Chemistry of Ministry of Education, Tsinghua University, Beijing, 100084, Peop. Rep. China
SO Xiamen Daxue Xuebao, Ziran Kexueban (2001), 40(2), 360-365
CODEN: HMHHAF; ISSN: 0438-0479
PB Xiamen Daxue
DT Journal
LA Chinese
AB Peptides and nucleotides could be obtained by self-organizing from N-phosphoryl-α-amino acids in water or organic solvent. However, .beta.-amino acids or γ-amino acids could not have the similar reactions in the same conditions. It was found that the characteristics of phosphorus chemical was decided on the characteristics of the mol. structure. The penta-coordinated phosphorus compds. had the single chemical selectivity for α-amino acids and ribose. The chemical selectivity accelerated the natural selective.
IT 56-84-8, Aspartic acid, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(basic chemical rule of mol. evolution)
RN 56-84-8 CAPLUS
CN L-Aspartic acid (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

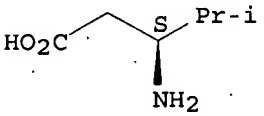


L9 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2001:21346 CAPLUS
DN 134:71895
TI Method for preparation of β -amino acids from amino alcohols
IN Kameyama, Naotaka; Furukawa, Yoshiaki
PA Daiso Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001002630	A	20010109	JP 1999-168551	19990615

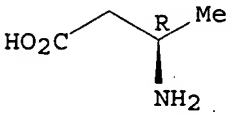
PRAI JP 1999-168551 19990615
OS CASREACT 134:71895; MARPAT 134:71895
AB β -Amino acids represented by formula R1CH(NP1P2)CH2CO2H (both P1 and P2 are same or different amino-protecting group; either one of P1 and P2 is amino-protecting group and the other is H) are prepared by introducing a leaving to N-protected amino alc. represented by formula R1CH(NP1P2)CH2OH (P1, P2, R1 = same as above), reaction of the resulting R1CH(NP1P2)CH2X (X = leaving group; P1, P2, R1 = same as above) with a cyanation reagent, and hydrolysis of the resulting nitrile represented by formula R1CH(NP1P2)CH2CN (P1, P2, R1 = same as above). This process efficiently gives β -amino acids in reduced steps, simple procedure, and good yields using readily available raw materials and inexpensive reagents. The β -amino acids are useful as intermediates for β-lactam antibiotics. Thus, 1.04 g methanesulfonyl chloride was added dropwise to a mixture of N-benzyloxycarbonyl-D-phenylalaninol 2.0, Et3N 1.27, 4-dimethylaminopyridine 0.04 g, 20 mL CH2Cl2 under ice-cooling and stirred at 15° for 2 h to give the mesylate (85% yield) which (2.17 g) was stirred with 0.32 g NaCN in 10 mL DMF at 70° for 4 h to give the nitrile (83%). To a mixture of the nitrile (1.45 g) and 4 mL 1,4-dioxane was added 5 mL concentrated 35% HCl and heated with stirring at 90° for 4 h to give, after purification on a column of Amberlite IR120B, 80% (R)-3-amino-4-phenylbutanoic acid.
IT 40469-85-0, (S)-3-Amino-4-methylpentanoic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of β -amino acids from amino alcs.)
RN 40469-85-0 CAPLUS
CN Pentanoic acid, 3-amino-4-methyl-, (3S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



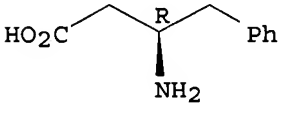
IT 3775-73-3P, (R)-3-Aminobutyric acid 131270-08-1P, (R)-3-Amino-4-phenylbutanoic acid
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of β -amino acids from amino alcs.)
RN 3775-73-3 CAPLUS
CN Butanoic acid, 3-amino-, (3R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



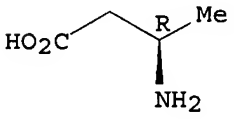
RN 131270-08-1 CAPLUS
CN Benzenebutanoic acid, β-amino-, (βR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



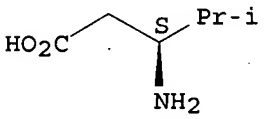
L9 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2000:442513 CAPLUS
DN 133:249134
TI Application of a new chiral stationary phase containing the glycopeptide antibiotic A-40,926 in the direct chromatographic resolution of . beta.-amino acids
AU D'Acquarica, I.; Gasparrini, F.; Misiti, D.; Zappia, G.; Cimarelli, C.; Palmieri, G.; Carotti, A.; Cellamare, S.; Villani, C.
CS P. le Aldo Moro 5, Dip. Studi di Chimica e Tecnologia delle Sostanze Biologicamente Attive, Universita 'La Sapienza', Rome, 00185, Italy
SO Tetrahedron: Asymmetry (2000), 11(11), 2375-2385
CODEN: TASYE3; ISSN: 0957-4166
PB Elsevier Science Ltd.
DT Journal
LA English
AB A new enantioselective HPLC procedure for the direct resolution of . beta.-amino acids is described, based on the use of a new chiral stationary phase (CSP) containing the macrocyclic glycopeptide antibiotic A-40,926, structurally related to teicoplanin, covalently bonded to silica gel microparticles. The new CSP shows higher enantioselectivity and broader applicability in this field compared to the parent teicoplanin phase. The potential for semi-preparative sepns. on the A-40,926-CSP is demonstrated for a selected cyclic β-amino acid.
IT 3775-73-3 40469-85-0
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(application of a new chiral stationary phase containing glycopeptide antibiotic A-40,926 in direct chromatog. resolution of β - amino acids)
RN 3775-73-3 CAPLUS
CN Butanoic acid, 3-amino-, (3R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 40469-85-0 CAPLUS
CN Pentanoic acid, 3-amino-4-methyl-, (3S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

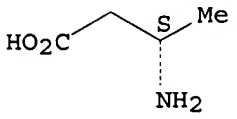


RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1999:26278 CAPLUS
DN 130:162702
TI Biological and pharmacokinetic studies with β-peptides
AU Seebach, Dieter; Abele, Stefan; Schreiber, Juerg V.; Martinoni, Bruno; Nussbaum, Alexander K.; Schild, Hansjoerg; Schulz, Henk; Hennecke, Hauke; Woessner, Ralph; Bitsch, Francis
CS Laboratorium Organische Chemie, Eidgenoessische Technische Hochschule Zurich, Zurich, CH-8092, Switz.
SO Chimia (1998), 52(12), 734-739
CODEN: CHIMAD; ISSN: 0009-4293

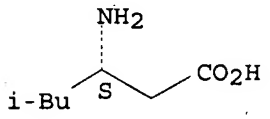
PB Neue Schweizerische Chemische Gesellschaft
DT Journal
LA English
AB Interactions and cleavage reactions of p-amino acids and β-oligopeptides (up to 9 residues, carrying the side chains of Ala, Val, Leu, Ile, Phe, Ser, Lys, and Hop) with biol. systems, such as the most potent peptidases (pronase, proteinase K, 20S proteasome), microorganisms (Pseudomonas aeruginosa and Pseudomonas putida), and mammalian blood (i.v. application to rats) were investigated and compared with α-peptides. The results are: i: the 3 peptidases do not cleave β-peptides at all (within 24 h), and they are not inhibited by a β-peptide; ii: except for certain 3-aminobutanoic-acid (β-HAla) derivs., neither free, nor N-acetyl-β -amino acids, nor β-peptides (offered as sole N and C source) lead to growth of the 2 bacteria tested; iii: 2 water-soluble β-heptapeptides (with Lys side chains) were shown to have elimination half-lives t1/2(β) of 3 and 10 h at 100- and 30-ng/mL levels, resp., in the rodent blood - much larger than those of α-peptides. Thus, the preliminary results described here confirm the much greater stability of β-peptides, as compared to α-peptides, towards metabolization processes, but they also suggest that there may be interactions (by hitherto unknown mechanisms) between the worlds of α- and β-peptides.
IT 3775-72-2 22818-43-5 75946-24-6
75992-50-6
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(biol. and pharmacokinetic studies with β-peptides)
RN 3775-72-2 CAPLUS
CN Butanoic acid, 3-amino-, (3S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



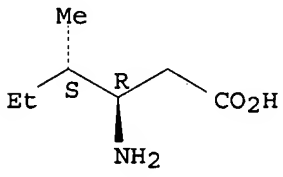
RN 22818-43-5 CAPLUS
CN Hexanoic acid, 3-amino-5-methyl-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 75946-24-6 CAPLUS
CN Hexanoic acid, 3-amino-4-methyl-, (3R,4S)- (9CI) (CA INDEX NAME)

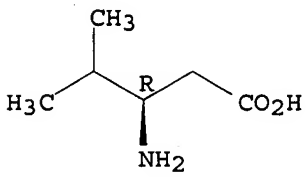
Absolute stereochemistry.



RN 75992-50-6 CAPLUS

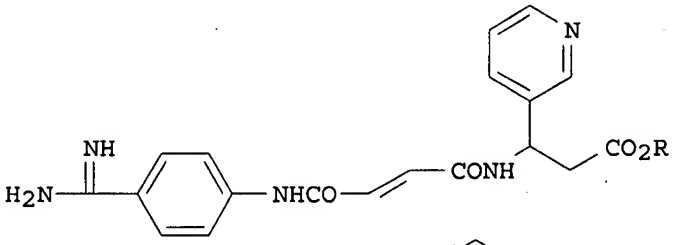
CN Pentanoic acid, 3-amino-4-methyl-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

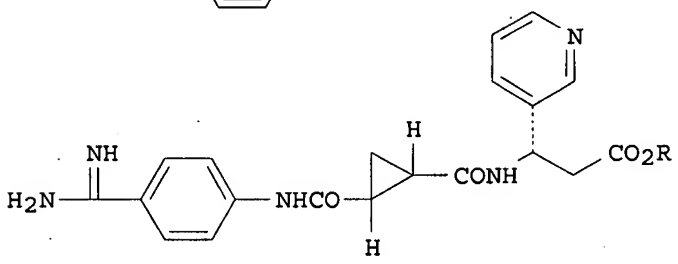


RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1995:328908 CAPLUS
DN 122:240416
TI Design of orally active, non-peptide fibrinogen receptor antagonists. An evolutionary process from the RGD sequence to novel antiplatelet aggregation agents
AU Bovy, P. R.; Tjoeng, F. S.; Rico, J. G.; Rogers, T. E.; Lindmark, R. J.; Zablocki, J. A.; Garland, R. B.; McMackins, D. E.; Dayringer, H.; et al.
CS Thrombosis Research, Searle, Skokie, IL, 60077, USA
SO Bioorganic & Medicinal Chemistry (1994), 2(9), 881-95
CODEN: BMECEP; ISSN: 0968-0896
PB Elsevier
DT Journal
LA English
GI



I



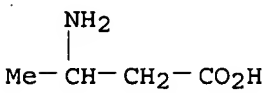
II

AB The evolutionary process from the Arg-Gly-Asp-Phe (RGDF) tetrapeptide to potent orally active antiplatelet agents is presented. The RGD sequence is an important component in the recognition of fibrinogen by its platelet receptor GP IIb-IIIa (integrin αIIbβ3). This work concs. on the replacement of the Arg-Gly dipeptidyl fragment by an acylated aminobenzamidine. The C-terminal fragment has been replaced by a variety of β -amino acids, expanding on a previously reported paradigm. The lead compds. showed good potency in an in vitro platelet aggregation assay (dog PRP/ADP). The affinity for the fibrinogen receptor was confirmed in several cases by the ability to inhibit 235I fibrinogen binding to activated human platelets. The Et ester prodrug form was tested by oral administration to dogs and monitoring of the anti-platelet effect on ex

vivo collagen induced platelet aggregation. From the structural studies reported, the (amidinophenyl)succinamic acid derivative 4-[HN:C(NH2)]C6H4NHCOCH2CH2CO2H was the best surrogate for the Arg-Gly dipeptide. Several conformationally restricted analogs are also reported which are compatible with the hypothesis of RGD binding to the αIIbβ3 in a turn-extended-turn conformation. The structure-activity relationships described also underline the importance of the β-amino acid substitution for potency. In particular, the absolute configuration at the β-carbon was crucial for high affinity. The best acid/ester pairs (I and II; R = H, Et) reported in this study had high potency (R = H; PRP/ADP IC50 .simeq. 50 nM) and showed good oral activity in dogs at 5 mg/kg per os (R = Et).

IT 541-48-0, (±)-3-Aminobutyric acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(design and synthesis of orally active nonpeptide fibrinogen receptor antagonists)

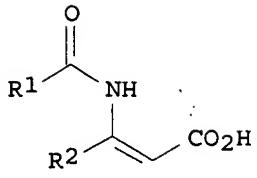
RN 541-48-0 CAPLUS
CN Butanoic acid, 3-amino- (CA INDEX NAME)



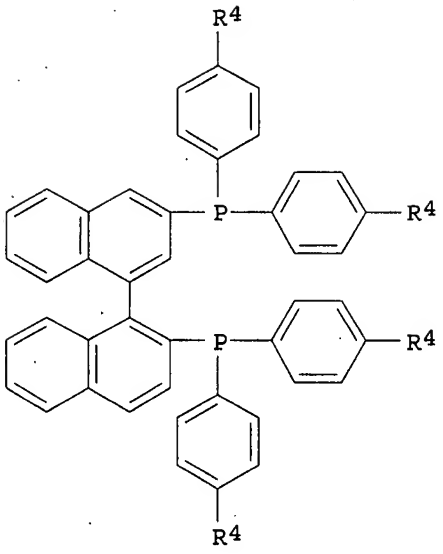
L9 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1995:294154 CAPLUS
DN 122:291528
TI Preparation of optically active β -amino acids by asymmetric hydrogenation of (Z)-3-N-acylamino-3-alkylacrylic acids
IN Saburi, Masahiko; Ueda, Yoichiro; Oonishi, Atsushi
PA Daicel Chem, Japan
SO Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06271520	A	19940927	JP 1993-60011	19930319
	JP 3493206	B2	20040203		
PRAI	JP 1993-60011		19930319		

OS CASREACT 122:291528; MARPAT 122:291528
GI



II



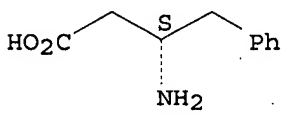
III

AB Optically active β -amino acids R1CONHCHR2CH2CO2H (R1 = lower alkyl, Ph, CH2Ph; R2 = lower alkyl, optionally substituted by Ph or alkoxycarbonyl), useful as intermediates for physiol. active peptides or β-lactam antibiotics, are prepared by asym. hydrogenation of (Z)-3-N-acylamino-3-alkylacrylic acids (I; R1, R2 = same as above) in the presence of an optically active ruthenium-phosphine complex, particularly represented by RuHCl(R4-BINAP)2, [RuH(R4-BINAP)2]Y, or [Ru(R4-BINAP)](O2CR5)2 (wherein R4-BINAP is represented by tertiary phosphine II; R4 = H, lower alkyl; Y = BF4-, PF6-, ClO4-, SbF6-; R5 = lower alkyl). This process uses relatively inexpensive catalysts, ruthenium-phosphine complexes, and gives β -amino acids of high optical purity. Thus, 58 mg (Z)-3-benzamido-2-hexenoic acid (III), 3.7 mg [RuH[(+)-BINAP]]2PF6 (preparation given), 1.25 mL THF, and 1.25 mL MeOH were hydrogenated in a stainless steel autoclave under H pressure 5 atm at 50° for 24 h to give 100% (3S)-(+)-3-benzamidohexanoic acid of 83% e.e. Similarly, asym. hydrogenation of III in the presence of [Ru[(-)-BINAP]](O2CCMe3)2 (preparation given) gave 100% (3R)-(-)-3-benzamidohexanoic acid of 72% e.e.

IT 26250-87-3P, (3S)-(+)-3-Amino-4-phenylbutyric acid
40469-85-0P, (3S)-(+)-3-Amino-4-methylpentanoic acid
75992-50-6P, (3R)-(-)-3-Amino-4-methylpentanoic acid
91298-66-7P, (3S)-(+)-3-Aminohexanoic acid 131270-08-1P, (3R)-(-)-3-Amino-4-phenylbutyric acid
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of optically active β -amino acids by asym. hydrogenation of (Z)-3-N-acylamino-3-alkylacrylic acids)

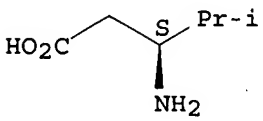
RN 26250-87-3 CAPLUS
CN Benzenebutanoic acid, β-amino-, (βS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



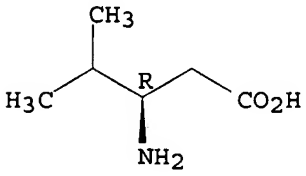
RN 40469-85-0 CAPLUS
CN Pentanoic acid, 3-amino-4-methyl-, (3S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



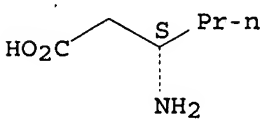
RN 75992-50-6 CAPLUS
CN Pentanoic acid, 3-amino-4-methyl-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



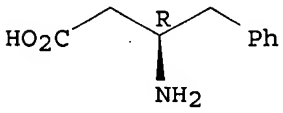
RN 91298-66-7 CAPLUS
CN Hexanoic acid, 3-amino-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

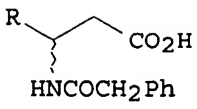


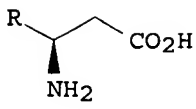
RN 131270-08-1 CAPLUS
CN Benzenebutanoic acid, β-amino-, (βR)- (9CI) (CA INDEX NAME)

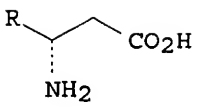
Absolute stereochemistry.



L9 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1995:30133 CAPLUS
DN 122:106415
TI Biocatalytic resolution of β-fluoroalkyl- β - amino acids
AU Soloshonok, Vadim A.; Kirilenko, Alexander G.; Fokina, Nataly A.; Shishkina, Irine P.; Galushko, Sergey V.; Kukhar, Valery P.; Svedas, Vytas K.; Kozlova, Elena V.
CS Catalysis Res. Center, Hokkaido Univ., Sapproro, 060, Japan
SO Tetrahedron: Asymmetry (1994), 5(6), 1119-26
CODEN: TASYE3; ISSN: 0957-4166
DT Journal
LA English
OS CASREACT 122:106415
GI



I


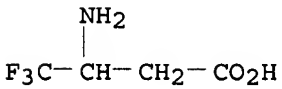
II


III

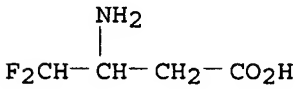
AB Racemic N-phenylacetyl-β-fluoroalkyl-β-alanines (±)-I (R = CF3, C2F5, C3F7, CHF2) were synthesized and biocatalytically resolved to the corresponding enantiopure β -amino acids II and III with the aid of penicillin acylase (EC 3.5.1.11) from Escherichia coli. In substrates (±)-I the enantioselectivity of the biocatalytic process was practically uninfluenced by the nature of the fluoroalkyl chain. Thus, β-fluoroalkyl-β-alanines II and II bearing short or long chains were prepared in high enantiomeric purity. The (R)-enantiomer was the fast-reacting enantiomer in all cases.

IT 584-20-3 77162-46-0 150618-42-1
150618-43-2 160707-31-3 178381-12-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of, with phenylacetyl chloride)

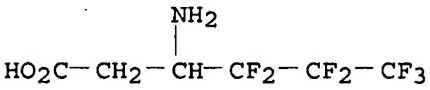
RN 584-20-3 CAPLUS
CN Butanoic acid, 3-amino-4,4,4-trifluoro- (9CI) (CA INDEX NAME)



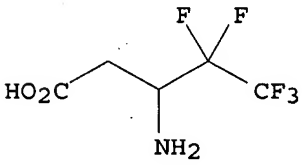
RN 77162-46-0 CAPLUS
CN Butanoic acid, 3-amino-4,4-difluoro- (9CI) (CA INDEX NAME)



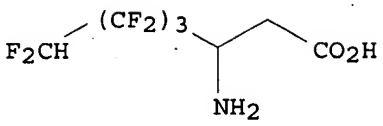
RN 150618-42-1 CAPLUS
CN Hexanoic acid, 3-amino-4,4,5,5,6,6,6-heptafluoro- (9CI) (CA INDEX NAME)



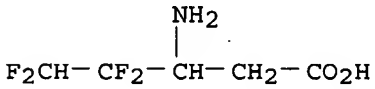
RN 150618-43-2 CAPLUS
CN Pentanoic acid, 3-amino-4,4,5,5,5-pentafluoro- (9CI) (CA INDEX NAME)



RN 160707-31-3 CAPLUS
CN Heptanoic acid, 3-amino-4,4,5,5,6,6,7,7-octafluoro- (9CI) (CA INDEX NAME)

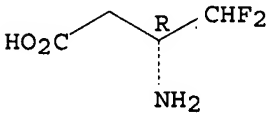


RN 178381-12-9 CAPLUS
CN Pentanoic acid, 3-amino-4,4,5,5-tetrafluoro- (9CI) (CA INDEX NAME)



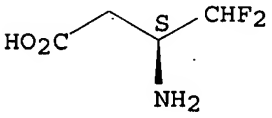
IT 109537-89-5P 111218-68-9P 151871-99-7P
151911-19-2P 151911-20-5P 151911-21-6P
151911-30-7P 151911-31-8P 157201-07-5P
157201-08-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, via biocatalytic resolution)
RN 109537-89-5 CAPLUS
CN Butanoic acid, 3-amino-4,4-difluoro-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



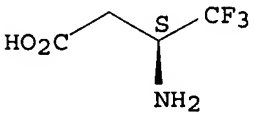
RN 111218-68-9 CAPLUS
CN Butanoic acid, 3-amino-4,4-difluoro-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



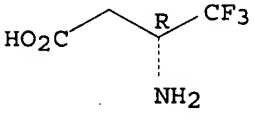
RN 151871-99-7 CAPLUS
CN Butanoic acid, 3-amino-4,4,4-trifluoro-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



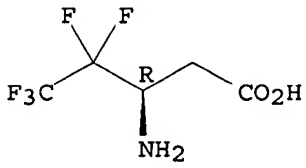
RN 151911-19-2 CAPLUS
CN Butanoic acid, 3-amino-4,4,4-trifluoro-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



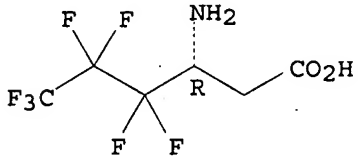
RN 151911-20-5 CAPLUS
CN Pentanoic acid, 3-amino-4,4,5,5,5-pentafluoro-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



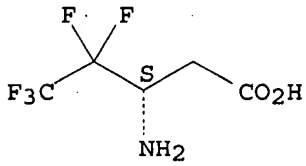
RN 151911-21-6 CAPLUS
CN Hexanoic acid, 3-amino-4,4,5,5,6,6,6-heptafluoro-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



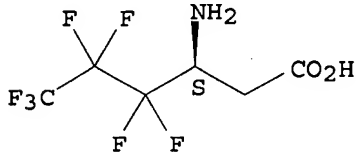
RN 151911-30-7 CAPLUS
CN Pentanoic acid, 3-amino-4,4,5,5,5-pentafluoro-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



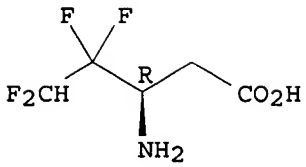
RN 151911-31-8 CAPLUS
CN Hexanoic acid, 3-amino-4,4,5,5,6,6,6-heptafluoro-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



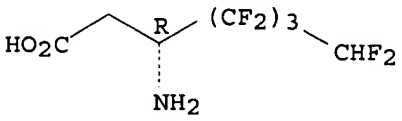
RN 157201-07-5 CAPLUS
CN Pentanoic acid, 3-amino-4,4,5,5-tetrafluoro-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 157201-08-6 CAPLUS
CN Heptanoic acid, 3-amino-4,4,5,5,6,6,7,7-octafluoro-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1994:320016 CAPLUS
DN 120:320016
TI Osmotic regulation of taurine transport via system β and novel processes in mouse preimplantation conceptuses
AU Van Winkle, Lon J.; Patel, Meghana; Wasserlauf, Howard G.; Dickinson, Helen R.; Campione, Allan L.
CS Department of Biochemistry,, Midwestern University, Downers Grove, IL, 60515, USA
SO Biochimica et Biophysica Acta, Biomembranes (1994), 1191(2), 244-55 CODEN: BBBMBS; ISSN: 0005-2736
PB Elsevier B.V.
DT Journal
LA English
AB The authors studied transport of taurine and related amino acids by preimplantation mouse conceptuses. The most conspicuous component of taurine transport in conceptuses at the 1-cell through blastocyst stages of development was both Na+ and Cl- dependent. This Na+- and Cl--dependent transport system interacted relatively strongly with β- but not α-amino acids. By these criteria, transport system β is responsible for Na+-dependent taurine transport in preimplantation mouse conceptuses. Moreover, detection of mRNA encoding the taurine transport protein (TAUT) in early conceptuses supports the theory that TAUT is a major component of system β. Transport of taurine by system β in 1-cell conceptuses was slower in hypotonic than in hypertonic media, whereas the reverse was true for system β in blastocysts. In contrast, hypotonically stimulated Na+-independent taurine transport was, of course, more rapid in hypotonic than in hypertonic media in both 1-cell conceptuses and blastocysts. Transport via this hypotonically stimulated process also showed no sign of saturation by up to 10 mM taurine. Hypotonically stimulated taurine transport appeared transiently in 1-cell conceptuses under hypotonic conditions until they had recovered their initial vols. Hence, the authors suggest that a decrease in taurine uptake via system β and an increase in taurine exodus via the Na+-independent, nonsaturable transport process could contribute to the regulatory volume decrease in 1-cell conceptuses in hypotonic medium. Since taurine uptake by system β in blastocysts is, however, higher in hypotonic than in hypertonic media, taurine uptake by system β in blastocysts might intensify a tendency to increase cell volume in hypotonic medium. Such an increase in taurine uptake could further favor anabolic changes associated with cell swelling. In addition to contributing to regulation of cellular volume and perhaps metabolism, the hypotonically stimulated Na+-independent transport

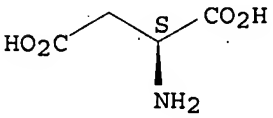
processes in early embryos have novel characteristics. Hypotonically stimulated Na+-independent taurine transport was inhibited by niflumate, N-ethylmaleimide, and NaN3 but not by furosemide, iodoacetate, KCN, ouabain, or α- or β -amino acids. Furthermore, DIDS inhibited this transport in 1-cell conceptuses but not in blastocysts. Hence, different hypotonically stimulated Na+-independent taurine transport processes appear to be present in 1-cell conceptuses vs. blastocysts. The functions of these and other instances of developmental regulation of expression of transport processes in preimplantation conceptuses remain largely to be elucidated. Moreover, neither of the hypotonically stimulated Na+-independent taurine transport processes in conceptuses appears to have been detected in other types of cells. Instead, these processes may be unique to preimplantation conceptuses.

IT 56-84-8, Aspartic acid, biological studies
RL: BIOL (Biological study)
(transport of, by preimplantation embryo, regulation of)

RN 56-84-8 CAPLUS

CN L-Aspartic acid (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L9 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1994:266834 CAPLUS

DN 120:266834

TI Properties of osmolyte fluxes activated during regulatory volume decrease in cultured cerebellar granule neurons

AU Pasantes-Morales, H.; Chacon, E.; Murray, R. A.; Moran, J.

CS Inst. Cell Physiol., Natl. Univ. Mexico, Mexico City, Mex.

SO Journal of Neuroscience Research (1994), 37(6), 720-7
CODEN: JNREDK; ISSN: 0360-4012

DT Journal

LA English

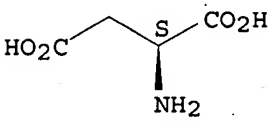
AB Efflux pathways for amino acids, K, and Cl activated during regulatory volume decrease (RVD) were characterized in cultured cerebellar granule neurons exposed to hyposmotic conditions. Results of this study favor diffusion pores (presumably channels) over energy-dependent transporters as the mechanisms responsible for the efflux of these osmolytes. The selectivity of osmolyte pathways activated by RVD was assessed by increasing the extracellular concns. of cations, anions, and amino acids to such an extent that upon opening of the pathway, a permeable compound will enter the cell and block RVD by reducing the efflux of water carried by the exit of intracellular osmolytes. The cationic pathway was found selective for K (and Rb), whereas the anionic pathway was rather unselective being permeable to Cl, nitrate, iodine, benzoate, thiocyanate, and sulfate but impermeable to gluconate. Glutamate and aspartate as K but not as Na salts were permeable through the anion channel. RVD was slightly inhibited by quinidine but otherwise was insensitive to known K channel blockers. RVD was inhibited by DIDS, niflumic acid, and dipyridamole. Gramicidin did not affect cell volume in isosmotic conditions but greatly accelerated RVD, suggesting that cell permeability to Cl is low in isosmotic conditions but increases markedly during RVD making K permeability the rate limit of the process. The permeability pathway for amino acids activated during RVD was permeable to short chain α- and β -amino acids, but excluded glutamine and basic amino acids.

IT 56-84-8, Aspartic acid, biological studies 14007-45-5, Potassium aspartate 17090-93-6, Sodium aspartate

RL: BIOL (Biological study)
(transport of, by brain cerebellar granule in regulatory volume decrease)

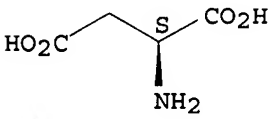
RN 56-84-8 CAPLUS
CN L-Aspartic acid (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 14007-45-5 CAPLUS
CN L-Aspartic acid, potassium salt (1:?) (CA INDEX NAME)

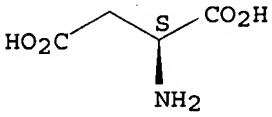
Absolute stereochemistry. Rotation (+).



●x K

RN 17090-93-6 CAPLUS
CN L-Aspartic acid, sodium salt (1:?) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



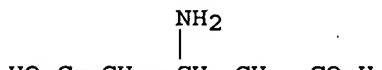
●x Na

L9 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1991:628003 CAPLUS
DN 115:228003
TI Distribution of compatible solutes in the halophilic methanogenic archaebacteria
AU Lai, Mei Chin; Sowers, Kevin R.; Robertson, Diane E.; Roberts, Mary F.; Gunsalus, Robert P.
CS Dep. Microbiol. Mol. Genet., Univ. California, Los Angeles, CA, 90024, USA
SO Journal of Bacteriology (1991), 173(17), 5352-8
CODEN: JOBAAY; ISSN: 0021-9193
DT Journal
LA English
AB Accumulation of compatible solutes, by uptake or de novo synthesis, enables bacteria to reduce the difference between osmotic potentials of the cell cytoplasm and the extracellular environment. To examine this process in the halophilic and halotolerant methanogenic archaebacteria, 14 strains were tested for the accumulation of compatible solutes in response to growth in various extracellular concns. of NaCl. In external NaCl concns. of 0.7-3.4M, the halophilic methanogens accumulated K+ and low-mol.-weight organic compds. β-Glutamate was detected in two halotolerant strains that grew below 1.5 NaCl. Two

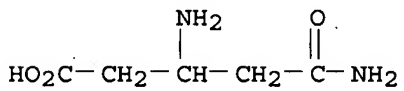
unusual β -amino acids, Nε-acetyl-β-lysine and β-glutamine (3-aminoglutaramic acid), as well as L-α-glutamate were compatible solutes among all of these strains. De novo synthesis of glycine betaine was also detected in several strains of moderately and extremely halophilic methanogens. The zwitterionic compds. (β-glutamine, Nε-acetyl-β-lysine, and glycine betaine) and K were the predominant compatible solutes among the moderately and extremely halophilic methanogens. This is the first report of β-glutamine as a compatible solute and de novo biosynthesis of glycine betaine in the methanogenic archaebacteria.

IT 1948-48-7 6706-21-4, β-Glutamine
131887-44-0
RL: BIOL (Biological study)
(osmotic potential adaptation in halophilic methanogenic archaebacteria in relation to accumulation of)

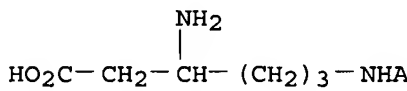
RN 1948-48-7 CAPLUS
CN Pentanedioic acid, 3-amino- (CA INDEX NAME)



RN 6706-21-4 CAPLUS
CN Pentanoic acid, 3,5-diamino-5-oxo- (9CI) (CA INDEX NAME)



RN 131887-44-0 CAPLUS
CN Hexanoic acid, 6-(acetylamino)-3-amino- (9CI) (CA INDEX NAME)



L9 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1953:12476 CAPLUS
DN 47:12476
OREF 47:2234g-i
TI Isolation and amino acid composition of β-globulin extracted from the seeds of barley (Hordeum vulgare)
AU Jensen, Robert
CS Carlsberg Breweries, Copenhagen
SO Acta Chemica Scandinavica (1952), 6, 771-81
CODEN: ACHSE7; ISSN: 0904-213X
DT Journal
LA English
AB The β-globulin was prepared by extracting ground barley with N NaCl and precipitating by 15% saturation with (NH4)2SO4; this process was repeated 4 times and the product dialyzed. The diffusion constant is 4.8 when calculated by the area method and 4.9 + 10-7 cm.2/sec. by the "second moment" method. The electrophoretic mobility is 3.5 + 10-5 cm.2/v./sec. at pH 7.05 and the peak is homogeneous throughout the determination The sedimentation constant in 0.2 N NaCl at 24° is 6.7. After hydrolysis the amino acids were separated by starch chromatography and quantitatively determined (Moore and Stein (C.A. 43, 5818d)). Corrected values (reported as % N of total N) are: leucine 7.3; isoleucine 2.1; phenylalanine 2.5;

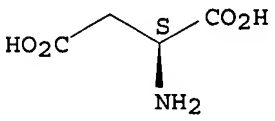
methionine 1.9; valine 7.1; tyrosine 4.1; proline 10.1; glutamic acid 10.6; alanine 6.4; threonine 4.3; aspartic acid 5.8; serine 3.6; glycine 4.9; NH3 11.8; arginine 5.4; lysine 2.5; histidine 2.8; cystine and cysteine 6.8. Tryptophan constituted 3.8% of the protein weight.

IT 56-84-8, Aspartic acid
(in β-globulin from barley)

RN 56-84-8 CAPLUS

CN L-Aspartic acid (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



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FULL ESTIMATED COST	98.57	270.88

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NEWS 6 MAR 30 RDISCLOSURE reloaded with enhancements
NEWS 7 APR 02 JICST-EPLUS removed from database clusters and STN

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NEWS 14   MAY 14  RDISCLOSURE on STN Easy enhanced with new search and display
                  fields
NEWS 15   MAY 21  BIOSIS reloaded and enhanced with archival data
NEWS 16   MAY 21  TOXCENTER enhanced with BIOSIS reload
NEWS 17   MAY 21  CA/CAplus enhanced with additional kind codes for German
                  patents
NEWS 18   MAY 22  CA/CAplus enhanced with IPC reclassification in Japanese
                  patents
NEWS 19   JUN 18  CA/CAplus to be enhanced with pre-1967 CAS Registry Numbers

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              MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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=> s chiral beta aminoacids
        116081 CHIRAL
            16 CHIRALS
        116085 CHIRAL
                  (CHIRAL OR CHIRALS)
       1460247 BETA
          1325 BETAS
       1460324 BETA
                  (BETA OR BETAS)
           182 AMINOACIDS
L1           0 CHIRAL BETA AMINOACIDS
                  (CHIRAL(W)BETA(W)AMINOACIDS)

=> s beta aminoacids
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          1325 BETAS
       1460324 BETA
                  (BETA OR BETAS)
           182 AMINOACIDS
L2           6 BETA AMINOACIDS
                  (BETA(W)AMINOACIDS)

=> d L2 1-6 bib abs

L2   ANSWER 1 OF 6  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2006:862736  CAPLUS
TI   New building blocks for the synthesis of conformationally restricted
     β-peptides
AU   Moran Ramallal, Antonio; Gonzalez, Javier; del Pozo Losada, Carlos; Macias
     Rabanal, Alberto
CS   Department of Organic and Inorganic Chemistry, Universidad de Oviedo,
     33006 - Oviedo, Spain
SO   Abstracts of Papers, 232nd ACS National Meeting, San Francisco, CA, United
     States, Sept. 10-14, 2006 (2006), ORGN-595 Publisher: American Chemical
     Society, Washington, D. C.
     CODEN: 69IHRD
DT   Conference; Meeting Abstract; (computer optical disk)
LA   English
AB   The development of new methodol. directed to the preparation of new types of
     conformationally-restricted β -aminoacids is a
     very active field of research in organic synthesis.  In our group we have
     been working on the preparation of β -aminoacids
     α,α-disubstituted, bearing a heterocyclic ring with the final
     objective of preparing new types of β-peptides.  The synthetic route
     involves the preparation of a spiranic β-lactam, through the ketene-imine
     cycloaddn. [2+2]-cycloaddn. reaction (Staudinger reaction), followed by
     the ring-opening.  In order to achieve very-mild conditions for the ring
     opening of the β-lactam, we introduced the electron-withdrawing group
     Boc on the β-lactam nitrogen, and use KCN as catalyst.  In this paper
     we describe the preparation of several types of β -
     aminoacids using this methodol.  The Staudinger reaction shows an
     excellent degree of stereocontrol, the reaction proceeds usually with good
     yields, and the compds. are obtained in an orthogonally-protected form.

L2   ANSWER 2 OF 6  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2006:861385  CAPLUS
TI   Yttrium(III) complexes: Highly active catalysts for ring opening
     polymerizations
AU   Williams, Charlotte K.
CS   Department of Chemistry, Imperial College London, London, SW7 2AZ, UK
SO   Abstracts of Papers, 232nd ACS National Meeting, San Francisco, CA, United
     States, Sept. 10-14, 2006 (2006), INOR-1000 Publisher: American Chemical
     Society, Washington, D. C.
     CODEN: 69IHRD
```

DT Conference; Meeting Abstract; (computer optical disk)
LA English
AB The chemical of poly(beta-aminoacids) has been experiencing a renaissance in recent years due to the ability of these materials to mimic secondary structural features of peptides. They have found application as peptide mimetics in pharmaceuticals, anti-microbial surfaces and medicinal applications where they are particularly valued due to their resistance to peptidases and other hydrolytic enzymes. The single-step synthesis of these polymers, via the metal catalyzed ring opening polymerization of lactams is presented. The synthesis and characteriation of well defined yttrium(III) amide complexes are described and these species are highly active and controlled catalysts for the ring opening polymerizaiton of (S)-4-(Benzyloxylcaronyl)-2-azetidone. The polymerization kinetics and mechanism are studied and the catalysts are shown to exert good polymerization control. The catalysts are also active for the ring opening polymerization of lactones and can be used to synthesize novel block copoly(ester-amides).

L2 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:693765 CAPLUS
DN 145:315252
TI A solution to the component instability problem in the preparation of peptides containing C2-substituted cis-cyclobutane β -aminoacids: synthesis of a stable rhodopeptin analog
AU Roy, Olivier; Faure, Sophie; Aitken, David J.
CS Laboratoire SEESIB-CNRS, Departement de Chimie, Universite Blaise Pascal, Clermont-Ferrand II, Aubiere, 63177, Fr.
SO Tetrahedron Letters (2006), 47(33), 5981-5984
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier B.V.
DT Journal
LA English
OS CASREACT 145:315252
AB Despite the inherent instability of C2-substituted cis-cyclobutane .beta.-aminoacids, incorporation of such residues into peptides is shown to be possible through use of a 1-amino-2-(hydroxymethyl)cyclobutane derivative as a stable β-aminoacid surrogate. This synthetic strategy was validated by the synthesis of a rhodopeptin analog.
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:124735 CAPLUS
TI Enzymatic resolution of cyclic N-Boc protected β -aminoacids [Tetrahedron: Asymmetry 15 (2004) 3407]
AU Pousset, Cyrille; Callens, Roland; Haddad, Mansour; Larcheveque, Marc
CS Laboratoire de Synthese Organique, ENSCP, CNRS, Paris, 75231 05, Fr.
SO Tetrahedron: Asymmetry (2005), 16(3), 745
CODEN: TASYE3; ISSN: 0957-4166
PB Elsevier B.V.
DT Journal; Errata
LA English
AB Unavailable

L2 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:522188 CAPLUS
TI Solution NMR and x-ray crystal structures of new chiral 1,4-oxazepinium heterocycles from 2,4-pentanedione
AU Lozada, Concepcion
CS Instituto de Quimica, UNAM, Coyo, Mex.
SO Abstracts, 36th Middle Atlantic Regional Meeting of the American Chemical Society, Princeton, NJ, United States, June 8-11 (2003), 319 Publisher: American Chemical Society, Washington, D. C.

CODEN: 69EBDT
DT Conference; Meeting Abstract
LA English
AB The reaction of 2,4-pentanedione 1 with (R)-(-)-2-phenylglycine Me ester 2, (R)-(-)-2-phenylglycinol 3 and the proteinogenic aminoacids (2S,3R)(-)-2-amino-3-hydroxybutyric acid (L-Threonine) 4, and (R)-(-)-2-amino-3-mercaptopropionic acid (L-cysteine) 5 Me esters was investigated. The corresponding enamines 6, 7, 8 were isolated and characterized spectroscopically while 9, unstable, was transformed in situ into 13. Furthermore, treatment of 7, 8 and 9 with Boron trifluoride etherate, afforded the new [1,4] oxazepines 10, 11, and [1,4] thiazepine 12 as their BF3O- salts. The structure of enamines and their corresponding seven member heterocycles was assessed by 1D and 2D NMR spectroscopy and by X-ray crystalog. detns. Variable temperature expts. showed different mol. mobility among these heterocycles. As a part of our studies with β-diketone compds. of natural origin, it became necessary to explore the reactivity of this chemical functionality with some α-L-amino acid Me esters and other chiral compds. i.e. (R)-(-)-2-phenylglycinol. Such reactions have led at a first step to the corresponding enamines; resulted from the nucleophilic attack of the primary amine function to 2,4-pentanedione at room temperature in CH2Cl2, with Me esters of β -aminoacids. Resulting products further were transformed into the corresponding seven-membered heterocycles, upon treatment with boron trifluoride etherate at room temperature
The NMR spectra of these heterocycles are distinct and uniquely associated with each of these structures.

L2 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1906:103540 CAPLUS
DN 0:103540
TI Synthesis of thymine and other uracils
AU Fischer, Emil; Roeder, George
SO Sitzungsberichte der Akademie der Wissenschaften in Berlin (1901), 12, 268-76
From: J. Chem. Soc., Abstr. 80, I, 294-5 1901
CODEN: SAWBEB
DT Journal
LA Unavailable
AB Hydrouracils may be produced either by the interaction of potassium cyanate and the salts of the esters of β -aminoacids , or by heating carbamide with an unsaturated acid. The preparations of 4-methyldihydrouracil, ethyl β-aminobutyrate, bromo-4-methyldihydrouracil, methyluracil, and 5-methyldihydrouracil are discussed. Their characteristics are also described.

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